

A New Species of the Genus *Cognettia* from Mt. Hayachine, Northern Japan (Oligochaeta: Enchytraeidae) (Enchytraeids in Japan 6)

Yoshio NAKAMURA

Department of Upland Farming, Tohoku National Agricultural Experiment Station,
Fukushima City, Fukushima Pref., 960–2156 Japan

Received: 19 September 2000; Accepted: 26 January 2001

Abstract A new species of the genus *Cognettia* is described from Mt. Hayachine, northern Japan: *Cognettia hayachinensis* sp. nov. It is characteristic in having one enlarged setae and its arrangement on segments V–VI.

Key words: Enchytraeidae, new species, *Cognettia*, Mt. Hayachine, Japan

During the course of a faunistic study of soil animals in a *Picea glehnii* forest of Mt. Hayachine, northern Japan, a new species of the genus *Cognettia* (Oligochaeta: Enchytraeidae) was found. Thirteen species assigned to the genus *Cognettia* were hitherto known from the world (CHRISTENSEN & DOZSA-FARKAS, 1999; NAKAMURA, 2000). The member of the genus *Cognettia* is recorded for the first time from Japan.

The genus *Cognettia* was erected by NIELSEN & CHRISTENSEN (1959), having the following characters, namely, (1) setae sigmoid, without nodulus, (2) head pore at 0/I, (3) dorsal pores absent, (4) gradual transition between oesophagus and intestine, (5) peptonephridia and oesophageal appendages absent, (6) dorsal vessel originating in or behind the clitellar region, (7) blood colorless or colored, (8) spermatheca simple and not attached to the oesophagus, as indicated by NIELSEN & CHRISTENSEN (1959) and Healy (1975; 1996).

Cognettia hayachinensis sp. nov.

(Japanese name: Hayachine-himemimizu)

(Fig. 1a–d)

Material examined: Holotype (NSMT-An-285) from litter-rich Ao layer of soil in a natural forest of *Picea glehnii* (about 1350 m alt.) of Mt. Hayachine in Iwate Prefecture of northern Japan, 16-V-2000, Y. NAKAMURA & T. FUJIKAWA leg.; 2 paratypes (NSMT-An-286, 287), the same data as the holotype.

Etymology: The species name refers to the name of

type locality, Mt. Hayachine.

Description: Medium sized, 9–12 mm long and 0.25–0.35 mm in diameter. Segments: 45–52. Color yellowish, cuticular glands usual form. Clitellum extends over 1/2 XI–1/2 XIII, gland cells small and arranged in transverse rows. Setae (Fig. 1D) sigmoid without nodulus: 1, 3, 4, 5–3, 4, 5 : 3, 4, 5–3, 4, 5. In the dorsolateral bundles V–VI only one enlarged seta present (Length 130 μ m against 60–70 μ m in other setae). Head pore at 0/I. Dorsal pores absent. Brain (Fig. 1D) as long as wide, slightly incised posteriorly. Three primary septal glands at IV/V and VI, with one septal gland in V. Gradual transition between oesophagus and intestine. Peptonephridia and oesophageal appendages absent. Chloragogen cells intensely brown. Dorsal vessel originating in XII–XV, blood colorless. Lymphocytes scarce in number and oval, but often with pointed ends. Nephridia (Fig. 1B) with a few canals in the anteseptale and the efferent duct tends to arise mid-ventrally on the postseptale, the anteriormost pair at VII/VIII. Seminal vesicles small, but often absent or poorly developed. Egg sac may extend to XVIII. Sperm funnel (Fig. 1A) cylindrical, two times longer than wide, the length approximately one fourth the diameter of the worm. Collar as wide as the funnel itself. The funnel gradually merged into a 6–7 times longer sperm duct. Atrium indistinct. Two or more eggs present at a time. Spermatheca (Fig. 1C) not attached to the oesophagus, with an ectal duct extending into VI or VII, with a small ampulla. No glands at the ectal orifice.

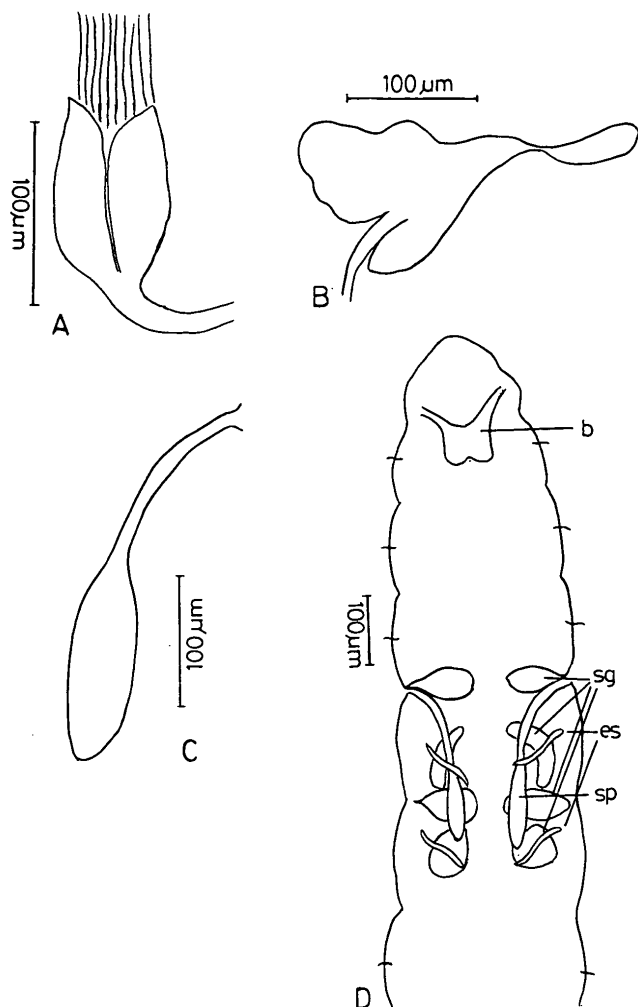


Fig. 1. *Cognettia hayachinensis* n. sp.

A: sperm funnel; B: nephridium; C: spermatheca; D: anterior segments (I–VII), dorsal view (b: brain, sg: septal glands, es: enlarged setae, sp: spermatheca).

Remarks: This species is distinguished from other species of *Cognettia* except *C. cognetti* by the presence of enlarged setae. This species is similar to *Cognettia cognetti* (ISSEL, 1905), but separable from the number of enlarged setae. The number of enlarged setae is two per

bundle in *C. cognetti* (CERNOSVITOV, 1945), while it is one per bundle in the new species.

Acknowledgments

The present writer wishes to acknowledge his indebtedness to Dr. T. FUJIKAWA of Fukushima City for her giving him an opportunity of faunistic study of enchytraeids in a *Picea glehnii* forest of Mt. Hayachine.

摘 要

中村好男 (〒960-2155 東北農業試験場畑地利用部, 福島市):
アミメヒメミズ属 (ヒメミズ科) の1新種.

Edaphologia No. 68: 15–16, 2001.

岩手県川井村の早池峰山のアカエゾマツ林から採集されたヒメミズ科 Enchytraeidae に属する1新種について, ハヤチネヒメミズ (新称) *Cognettia hayachinensis* sp. nov. と命名し, 記載した. 本種は *Cognettia cognetti* に似ているが, 肥大剛毛が *C. cognetti* では1剛毛束に2本あるのに対し, 本種では1本であることから, 区別される.

References

- CERNOSVITOV, L., 1945. Oligochaeta from Windermere and the Lake Districts. *Proc. Zool. Soc. London*, **114**: 523–548.
- CHRISTENSEN, B. & DOZSA-FARKAS, K., 1999. The enchytraeid fauna of the Palearctic tundra (Oligochaeta, Enchytraeidae). *Biol. Skrft.*, **52**: 1–37.
- HEALY, B., 1975. A description of five new species of Enchytraeidae (Oligochaeta) from Ireland. *Zool. J. Linnean Soc.*, **56**: 315–326.
- HEALY, B., 1996. Records of Enchytraeidae (Annelida: Oligochaeta) from west Florida, 1. *Mesenchytraeus*, *Cognettia*, *Bryodrilus*, *Hemienchytraeus*, *Henlea* and *Buchholzia*. *Proc. Biol. Soc. Wash.*, **109**: 118–137.
- ISSEL, R., 1905. Oligocheti inferiori della fauna italiana. I. Enchitreidi di Val Pellice. *Zool. Jarb. Abt. Syst.*, **22**: 451–471.
- NAKAMURA, Y., 2000. Checklist of enchytraeids (Oligochaeta: Enchytraeidae) of the world. *Misc. Publ. Tohoku Natl. Agric. Exp. Stn.*, (24): 29–104. (In Japanese)
- NIELSEN, C. O. & CHRISTENSEN, B., 1959. The Enchytraeidae, critical revision and taxonomy of European species. *Natura Jutlandica*, **8-9**: 1–160.